The Files, Project 2111

24 May 1957

25X1A9a [redacted]

Trip Report, Contract RD-116, Task Order 1 - White Sands Proving Grounds, New Mexico, Equipment

25X1A9a 1. During the period of 30 April to 11 May 1957, in company with [redacted] of SPD/EAG, I visited White Sands Proving Grounds, New Mexico, for the purpose of evaluating performance of the equipment developed under Task 1 of Contract RD-116 against actual operating conditions. Also present during the first two days of briefings by the WSPG people were Messrs. 25X1A9a [redacted] of DD/P-SR. Those persons contacted at WSPG were:

Col. Hirshorn	Deputy Commanding Officer
Col. Coleman	Executive Officer
Lt. Col. Cunningham	Chief, Integrated Range Mission
Col. Carlysle	Chief Signal Officer
Lt. Col. Wells	Provost Marshal, Physical Security
Lt. Col. Dowler	G-2 Intelligence
Capt. Taylor	ASA
Capt. Fumich	Deputy Director, Electronic Warfare
Mr. Jerry Smith	Electronic Warfare
Mr. Vernon Miller	Chief, Flight Determination Laboratory
Mr. William Wehlenberg	Chief, Telemetry Instrumentation
Mr. Gail Hungate	Frequency Coordination

2. The second and third of May were spent in briefing sessions with one or more of the above named persons, who described his particular function and how it fitted with the overall operation of the Proving Grounds. Much of this was slanted toward problems common to this, and other ranges, and was of primary 25X1A9a interest to Mr. [redacted]. On 3 May, Mr. [redacted] and II 25X1A9a spent the afternoon with Jerry Smith and with Vernon Miller discussing the problem of range instrumentation. Following these briefings, Messrs. [redacted] returned to Washington. 25X1A9a

25X1C [redacted]

[redacted]

5X1C4a

4. A detailed report of equipment performance will be issued at a later date; consequently, only the highlights of the operation during the week of May 6 through 10 will be touched on. Following a discussion of our proposed schedule with Lt. Col. Wells, a 3/4 ton truck (a 4-wheel drive weapons carrier) and

driver was assigned to us for the week. Our driver was Cpl. Berblee, an MP on the regular security force.

5. The highlights of the weeks' activities are itemized by days.

Monday - 6 May — The equipment was set up 26 miles up range, slightly west of north from the range head. No telemetering was scheduled for any missile firing, but a general search was made to ascertain what signals were on the air. We found that there is a great deal of activity, much of it emanating from Holloman Air Base, which was 25 miles almost east from our location. The equipment performed quite well.

Tuesday - No missiles carrying telemetering scheduled for this day so this period was used to move on to location at Skillet Knob, at an elevation of approximately 8,500 feet, 60 miles up range, and almost north of the range head. The equipment was set up and tested briefly in this location. A tremendous number of signals were noted, many from Albuquerque, 128 miles north, others from El Paso, 104 miles south. On one occasion, a police call from Hamden, Connecticut, was intercepted. We encountered equipment failure after the first five (5) minutes of operation, which was attributed to the pounding the equipment took in being transported over the mountain roads. Replacement of the pencil triode tube partly corrected the problem. We found that this second tube tended to be intermittent. A third tube was put in place and the equipment appeared to work satisfactorily, with no apparent change in calibration accuracy. We stayed overnight at the Harden ranch, 15 miles west of Skillet Knob.

Wednesday - Again at Skillet Knob, the equipment was set up for operation. There were more signals present than "bugs;" therefore it was impossible to eliminate all active channels within range of the equipment. Manual sector scanning procedures were initiated, and many of the signals were recorded. Telemetering signals were heard.

Thursday - The equipment was set up seven miles behind the firing line. There were fewer signals noted and all were "bugged" out. Even so, a manual sector scanning

procedure was set up and a missile firing was caught and recorded. Just before noon, another missile was fired which the equipment caught and recorded. The second missile had not been listed on our schedule for the day's activities, but we were able to successfully capture the entire flight from launch to termination. All of this flight, however, was not recorded as tape ran out after approximately 2 1/2 minutes of missile flight time. Thursday afternoon we moved to a location approximately 15 miles northeast, and up range from the range head. Many signals were noted; however, all missile launchings had been canceled for the afternoon. Equipment was secured, and we returned to headquarters.

Friday - The day was spent in consultation with Mr. Vernon Miller, followed by a tour of their data reduction center. Their equipment is highly specialized and includes the use of a large IBM Univac (at $100 per hour).

6. In conclusion, it is felt that the equipment operated in a very satisfactory manner. The recorder is known, however, to be somewhat marginal in performance; but final evaluation will not be possible until after the tapes we made are analyzed by our data reduction center. The results of these tapes, photographs, and other supporting documentation and information will be made the subject of a later report.

[redacted] 25X1A9a

Attachment: Travel Orders

OC-E/R&D-EP/FCS:cmf (27 May 1957)

cc: R&D Subject File
✓ Monthly Report (2)
SPD
R&D Chrono
EP Chrono